Economic Clustering Summary Report: Ethiopia 2019

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# Summary of Data

**Country Code-year:** ET19

**Number of observations:** 8663

**Number of clusters:** 5

**Number of variables used:** 24

**Distance used:** Hamming

**Variables used in the algorithm:** hv206, hv207, hv208, hv209, hv243a, hv243b, hv243e, hv244, hv246, hv246h, hv247, sh121g, sh121h, sh121i, sh121j, sh121k, sh124, sh125, water, toilet, floor, roof, cookfuel, wall

# Top Variable Groupings (Sorted by ASW)

| Group | ASW | Var. 1 | Var. 2 | Var. 3 | Var. 4 |
| --- | --- | --- | --- | --- | --- |
| 1 | 0.9729 | has television | has refrigerator | has mobile telephone | has a computer |
| 2 | 0.9678 | has television | has refrigerator | has a computer | receiving cash of food from the safety net program |
| 3 | 0.967 | has electricity | has television | has refrigerator | has a computer |
| 4 | 0.9644 | has electricity | has refrigerator | has a computer | electric mitad |
| 5 | 0.9638 | has refrigerator | has mobile telephone | has a computer | electric mitad |
| 6 | 0.9629 | has electricity | has refrigerator | has mobile telephone | has a computer |
| 7 | 0.9629 | has television | has mobile telephone | has a computer | electric mitad |
| 8 | 0.9619 | has electricity | has refrigerator | has a computer | bed with cotton/spring mattress |
| 9 | 0.9615 | has refrigerator | has a computer | electric mitad | receiving cash of food from the safety net program |
| 10 | 0.9607 | has electricity | has mobile telephone | has a computer | electric mitad |

# Marginal Distributions

| Variable | Description | % Time in Top Clusters | Distribution |
| --- | --- | --- | --- |
| hv208 | has television | 40% | Binary, 22.9% 1s (or yes) |
| hv206 | has electricity | 50% | Binary, 38% 1s (or yes) |
| hv209 | has refrigerator | 80% | Binary, 12.3% 1s (or yes) |
| hv243a | has mobile telephone | 50% | Binary, 68.8% 1s (or yes) |
| hv243e | has a computer | 100% | Binary, 5.9% 1s (or yes) |
| sh121j | electric mitad | 50% | Binary, 11% 1s (or yes) |
| sh124 | receiving cash of food from the safety net program | 20% | Binary, 16.9% 1s (or yes) |
| sh121i | bed with cotton/spring mattress | 10% | Binary, 38.4% 1s (or yes) |

# Cluster #1 Configuration

| Cluster Group | has television | has refrigerator | has mobile telephone | has a computer | Proportion (%) |
| --- | --- | --- | --- | --- | --- |
| 1 | 1 | 0 | 1 | 0 | 9.89 |
| 2 | 0 | 0 | 0 | 0 | 31.13 |
| 2 | 0 | 0 | 0 | 1 |  |
| 2 | 0 | 1 | 0 | 0 |  |
| 2 | 1 | 0 | 0 | 0 |  |
| 2 | 1 | 0 | 0 | 1 |  |
| 2 | 1 | 1 | 0 | 0 |  |
| 3 | 0 | 1 | 1 | 0 | 7.49 |
| 3 | 1 | 1 | 1 | 0 |  |
| 4 | 0 | 1 | 0 | 1 | 4.56 |
| 4 | 0 | 1 | 1 | 1 |  |
| 4 | 1 | 1 | 0 | 1 |  |
| 4 | 1 | 1 | 1 | 1 |  |
| 5 | 0 | 0 | 1 | 0 | 46.92 |
| 5 | 0 | 0 | 1 | 1 |  |
| 5 | 1 | 0 | 1 | 1 |  |

# Validation Tables

## a.1) Using Children Deceased (Sorted by proportion of 0%)

| Cluster ID/Children Deceased | 0% | 1-33% | 34-66% | 67+% |
| --- | --- | --- | --- | --- |
| 2\* | 551 (95.5%) | 17 (2.9%) | 6 (1.0%) | 3 (0.5%) |
| 3 | 737 (93.4%) | 35 (4.4%) | 11 (1.4%) | 6 (0.8%) |
| 4 | 928 (89.6%) | 79 (7.6%) | 18 (1.7%) | 11 (1.1%) |
| 5 | 3,335 (81.2%) | 565 (13.8%) | 164 (4.0%) | 44 (1.1%) |
| 1 | 1,848 (77.8%) | 385 (16.2%) | 121 (5.1%) | 21 (0.9%) |
| Total | 7,399 (83.3%) | 1,081 (12.2%) | 320 (3.6%) | 85 (1.0%) |
| \*The chi-squared p-value is 0 | | | | |

## a.2) Aggregating proportions greater than 0%

| Cluster ID/Children Deceased | 0% | >0% |
| --- | --- | --- |
| 2\* | 551 (95.5%) | 26 (4.5%) |
| 3 | 737 (93.4%) | 52 (6.6%) |
| 4 | 928 (89.6%) | 108 (10.4%) |
| 5 | 3,335 (81.2%) | 773 (18.8%) |
| 1 | 1,848 (77.8%) | 527 (22.2%) |
| Total | 7,399 (83.3%) | 1,486 (16.7%) |
| \*The chi-squared p-value is 0 | | |

## b) Using Individual Education Level Attained (Sorted by weighted average by row)

| Cluster ID/Education | 0 | 1 | 2 | 3 | 4 | 5 | W. Avg. |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 2\*a | 58 (10.1%) | 106 (18.4%) | 30 (5.2%) | 97 (16.8%) | 37 (6.4%) | 249 (43.2%) | 3.21 |
| 3 | 102 (12.9%) | 221 (28.0%) | 79 (10.0%) | 182 (23.1%) | 49 (6.2%) | 156 (19.8%) | 2.41 |
| 4 | 220 (21.2%) | 340 (32.8%) | 93 (9.0%) | 210 (20.3%) | 25 (2.4%) | 148 (14.3%) | 1.93 |
| 5 | 1,777 (43.3%) | 1,466 (35.7%) | 235 (5.7%) | 431 (10.5%) | 18 (0.4%) | 181 (4.4%) | 1.02 |
| 1 | 1,483 (62.4%) | 705 (29.7%) | 70 (2.9%) | 99 (4.2%) | 1 (0.0%) | 17 (0.7%) | 0.52 |
| Total | 3,640 (41.0%) | 2,838 (31.9%) | 507 (5.7%) | 1,019 (11.5%) | 130 (1.5%) | 751 (8.5%) | 1.26 |
| \*The chi-squared p-value is 0 | | | | | | | |
| a0=none,1=incomplete primary, 2=primary, 3=incomplete secondary, 4=secondary, 5=higher | | | | | | | |

## c) Using Primary Healthcare Source (Sorted by % enrolled in public healthcare [ascending order])

| Cluster ID/Primary Healthcare Source | 0 | 1 | 2 |
| --- | --- | --- | --- |
| 2\*a | 68 (62.4%) | 32 (29.4%) | 9 (8.3%) |
| 3 | 145 (70.0%) | 54 (26.1%) | 8 (3.9%) |
| 4 | 230 (71.0%) | 83 (25.6%) | 11 (3.4%) |
| 5 | 851 (84.8%) | 129 (12.8%) | 24 (2.4%) |
| 1 | 420 (91.1%) | 25 (5.4%) | 16 (3.5%) |
| Total | 1,714 (81.4%) | 323 (15.3%) | 68 (3.2%) |
| \*The chi-squared p-value is 0 | | | |
| a0=public/government, 1=private, 2=other | | | |